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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,583	10/12/2005	Denis Roller	125402	2540

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EXAMINER

LEE, BENJAMIN P

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/552,583	<b>Applicant(s)</b> ROLLER ET AL.	
	<b>Examiner</b> Benjamin P. Lee	<b>Art Unit</b> 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,7,8 and 10-17 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 9 and 18-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

1. Claims 1-20 have been examined.

### ***Claim Objections***

2. Claims 17 and 18 are objected to because of the following informalities: In line 2, applicant uses a pronoun ("it") presumably to refer to the "microactuators". Examiner suggests replacing the pronoun with the subject matter to which "it" refers. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 7, 8, 10-13 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hans et al. (U.S. Patent 5123355).
4. In regards to claim 1, Hans et al disclose the following:
  - a. a device for the electrical initiation of at least one pyrotechnic microcharge  
(item 17 of fig. 3D following and col. 2, lines 39-52);
  - b. a support element having at least one electrically conductive portion

connected to a first terminal of a central control unit (item 21 of fig. 4 following);

- c. a second terminal of said central control unit being intended to be electrically connected to an electrically conductive support (item 12 of fig. 4 and 3D following and col. 3, lines 54-58);
- d. the microcharge being located at a sufficient distance from said conductive support to be able to be ignited by localized heating of the support (col. 4, lines 50-64);
- e. heating being carried out via the conductive portion placed in contact with the conductive support, just beneath the pyrotechnic microcharge (col. 4, lines 50-64 and see fig. 3D following).

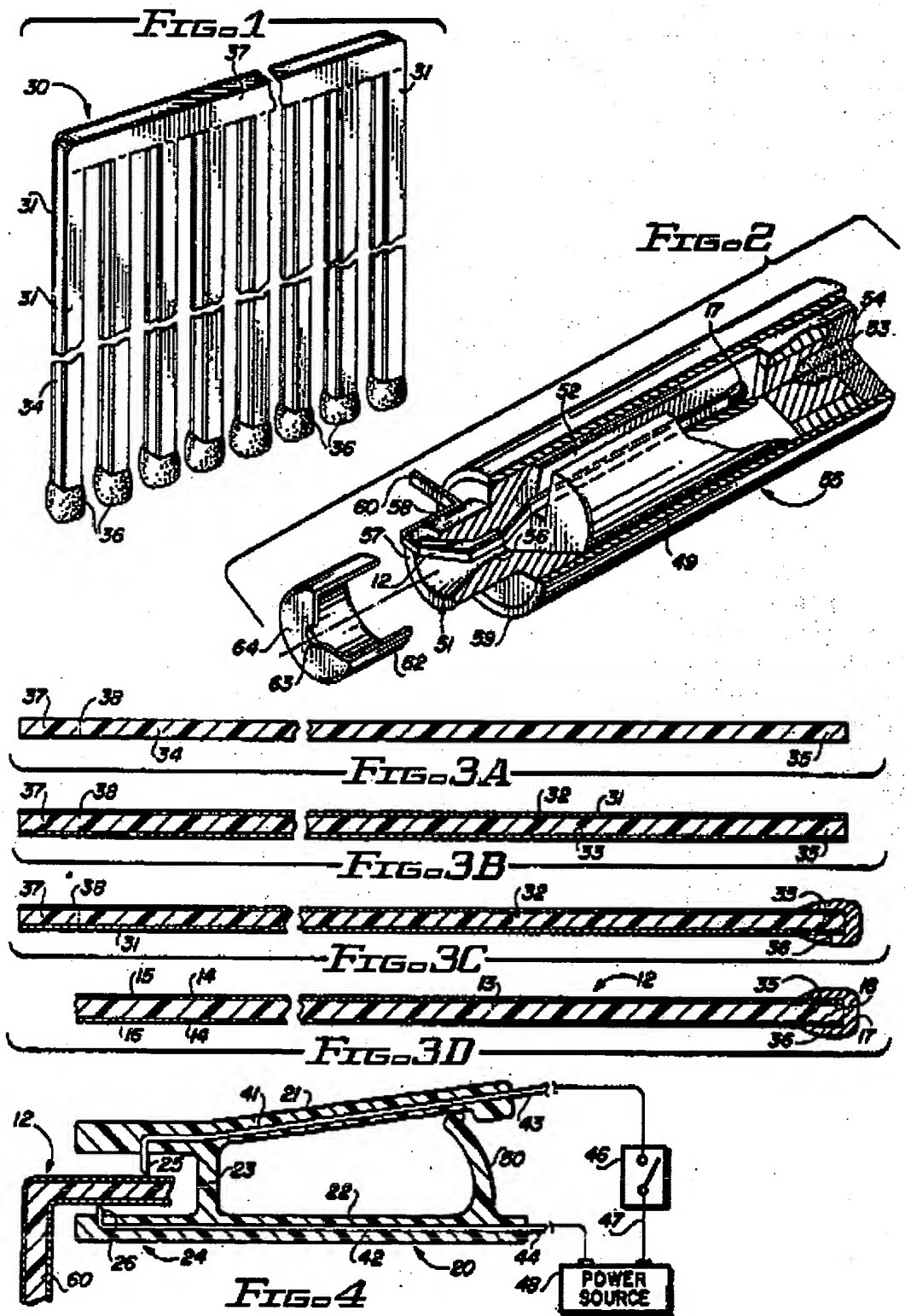
5. In regards to claim 2, Hans et al disclose that the pyrotechnic microcharge is deposited on the conductive support (see fig. 3D following).

6. In regards to claim 3, Hans et al disclose that the pyrotechnic microcharge is separated from the support by at least one thermally conductive layer (col. 3, lines 40-47).

7. In regards to claim 4, Hans et al disclose that the conductive portion is produced at least at the top of a finger (item 25 of fig. 4 following) being positioned so as to bear via its top against the conductive support (see fig. 4 following).

8. In regards to claim 7, Hans et al disclose that the finger consists of a boss made of flexible material formed on the support element (item 25 as shown in fig. 4 following constitutes “a small projection” as “Boss” is defined by [www.dictionary.com](http://www.dictionary.com) and item 41 is disclosed as “wire” which is inherently “flexible”).

9. In regards to claim 8, disclose that the support element consists of a thermoformed sheet of flexible material in which said boss is formed, the boss forming a finger intended to bear via its top against the conductive support (col. 3, lines 48-55). Note that the “support element” (item 21 of fig. 4 following) is disclosed by Hans et al to consist of “pliable plastic” which is inherently produced using a thermoforming method and item 21 constitutes a “sheet” to the degree specified by applicant.



10. In regards to claim 10, Hans et al disclose the support element comprises a plurality of fingers the position of the fingers can be adjusted.

11. In regards to claim 11, Hans et al disclose the following:

- a. an actuating element that can be actuated by the gases emanating from the combustion of at least one pyrotechnic microcharge (col. 1, lines 44-62). Note that Hans et al disclose that igniter "burns" inherently producing a "gas" and in turn, ignites the propellant;
- b. microcharge is located at a sufficient distance from a conductive layer to be able to be ignited by localized heating using an initiation device in accordance with that of claim 1 (see rejection of claim 1 and col. 4, lines 50-64);
- c. an electrically conductive portion (col. 3, lines 40-47) is placed on said pyrotechnic microcharge in contact with the conductive layer, just beneath said pyrotechnic microcharge.

12. In regards to claim 12, Hans et al disclose that the pyrotechnic microcharge is deposited on a face of the conductive layer and in that the conductive portion is in contact with the face of the conductive layer on the opposite side to that on which the pyrotechnic microcharge is deposited (col. 3, lines 40-47 and see figs. 4 and 3D followng).

13. In regards to claim 13, Hans et al disclose that the conductive layer consists of a metal film (col. 3, lines 40-47).

14. In regards to claim 17, Hans et al disclose that it is produced by assembling superposed layers. Note that each igniter (item 12 of fig. 4 following) is constructed of a plastic film body "layer" with a foil overlay constituting "assembling superposed layers" (col. 3, lines 40-45).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.



Art Unit: 3641

15. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hans et al. (U.S. Patent 5123355) in view of Baginski et al. (U.S. Patent 6105503).

16. In regards to claim 14, Hans et al fail to disclose that the film is made of aluminum. However, Baginski et al disclose a conductive film made of aluminum for initiating a pyrotechnic device (col. 6, lines 4-10). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use a conductive film made of aluminum because it is a good conductor and less susceptible to corrosion.


17. In regards to claims 15 and 16, the combination of Hans et al and Baginski et al disclose the invention except for the thickness of the aluminum layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to require a range of values for the thickness of the aluminum layer, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

#### ***Allowable Subject Matter***

18. Claims 5, 9 and 18-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

19. Claims 1-4, 7, 8 and 10-17 are rejected. Claims 5, 9 and 18-20 are objected to.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin P. Lee whose telephone number is 571-272-8968. The examiner can normally be reached between the hours of 8:30am and 5:00pm on Monday through Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
MICHELLE CLEMENT  
PRIMARY EXAMINER